DOCUMENT RESUME

ED 403 881 IR 018 238

AUTHOR Tyan, Nay-ching Nancy; Hu, Yi-chain
TITLE Attitude Change as Mediated by Audience-Tailored Video and Follow-Up Discussion.
SPONS AGENCY Taiwan National Science Council, Taipei.
PUB DATE Feb 97
CONTRACT NSC-84-2411-H-152-002
NOTE 27p.; Paper presented at the Annual Meeting of the Association for Educational Communications and Technology (Albuquerque, NM, February 12-16, 1997).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Age Discrimination; Aging (Individuals); *Attitude Change; *Audience Response; *Childhood Attitudes; *Discussion (Teaching Technique); Foreign Countries; Grade 6; Grandparents; *Individualized Instruction; Intermediate Grades; Interpersonal Communication; Older Adults; Scripts; Student Attitudes; *Videotape Recordings
IDENTIFIERS Taiwan

ABSTRACT

A study was conducted to determine if audience-tailored videotapes and the format of follow-up discussions can change audience attitudes. Sixth-grade students in Taiwan were given a survey on their attitudes toward elderly people. Scripts for videotapes were written based on the data obtained from the survey. Children found to have a negative attitude toward the elderly (n=90) were assigned to one of six groups to view a videotape entitled, "Living with elders is like having a treasure in the home." Three groups were shown a "perfect" version of the videotape, which showed the bright side of elderly people and emphasized the benefits children can get from spending time with elders, and three groups were shown a "realistic" version, which stressed that though elders may have some unpopular personality traits, they are well-intentioned. After watching the videotape, two groups had no discussion, two viewed an additional videotape of interviews with the video's child actors expressing their real-life attitudes toward the elderly, and two groups participated in a follow-up discussion led by the teacher. Three out of six groups experienced a positive change in attitude. Dramas emphasizing positive images of subject material lead to improvement in childrens' attitudes. In addition, good-quality follow-up discussion can be helpful in enabling children to change their attitudes. (Contains 38 references.) (SWC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 403 881

Attitude change as mediated by audience-tailored video and follow-up discussion

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Dr. Nay-ching Nancy Tyan
Associate Professor, Director of Audio-Visual Center
National Taipei Teachers' College

Yi-chain Hu
Instructor
National Open University

Paper presented at 1997 National Convention
of the Association for
Educational Communications and Technology (AECT)

Albuquerque, New Mexico, USA
February, 1997

This research was supported by
the National Science Council Executive Yuan
of the Republic of China
(Grant # NSC 84-2411-H-152-002)

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY
Nay-ching Nancy Tyan
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

BEST COPY AVAILABLE

IR018238

ABSTRACT

The purpose of this experiment was to study the effects of audience-tailored videos and follow-up discussions on attitude changes in Taiwan sixth graders.

During the spring semester of 1994, the researchers assigned 90 Taiwan sixth graders, identified earlier as having negative attitudes toward the elderly, to one of six groups to receive pre-testing, treatment and post-testing. Each of the groups watched one of two versions of a videotape entitled 'Living with elders is like having a treasure in the home', after which, some were exposed to different kinds of discussions of the videotape content, and some were not.

The title of the video is from an old Chinese saying, "Living with elders is like having a treasure in the home". The perfect version presented the bright side of the elderly by emphasizing the benefits children can get from spending time with elders. Whereas, the realistic version stressed that though elders might have some unpleasant personality traits, they all meant well. Before writing scripts for both versions, the researcher conducted a pre-production survey (N=233) to learn about how sixth graders feel about the way the elderly people they know behave. The findings were used as an input in developing the video.

In the video-taped discussion, a reporter interviewed the child actors. They talked about the one thing that impressed them the most while making this video, their real-life experiences with the elderly, and how their attitudes toward elders differed before and after making this video. The reporter concluded each session with the old Chinese saying about elders being treasures in one's home. While for the two groups in which subjects held discussions after watching the video, the researchers arranged to have a teacher lead students in reviewing the story, analyzing the personalities of the roles and the authenticity of the play, and in sharing their experiences and feelings about living with elderly people.

The researchers conducted student t-tests for dependent samples to compare the pre-test and the post-test scores, and found significant attitude changes (changes from negative to positive) in three out of the six groups.

At the end of the paper, the researchers recommend, based upon their findings, that developers and users of video programs aimed at changing childrens' attitude toward certain attitude objects, select appropriate script styles and follow-up discussion formats.

Attitude change as mediated by audience-tailored video and follow-up discussion

CHAPTER 1 INTRODUCTION

BACKGROUND OF THE STUDY

Because of advances in medical science, people are living longer than ever before. Men's average life spans in Taiwan reached 72.02 years in 1993, while women's reached 77.42 years. In addition, since social and economic development has improved daily life, the ancient Chinese view: "the more children one has, the better off one is. " changing. People are gradually accepting smaller families and are beginning to establish families with only one or two children. According to Taiwan demographic data (Ministry of Interior Affairs & Directorate General of Budget, Accounting and Statistics, Executive Yuan, Republic of China, 1994), the total over-65 population was 1,490,801, 54% male (811,880) and 46% female (678,921). People over 65 account for 7.83% of Taiwan's total population (19,036,166). This means that there were almost 8 people who were over 65 in every 100 people. This situation has matched the French scholar P. Parillat proposed: "It is an aged country when people over 65 constitute 7% - 8% of the total population" (Chian, 1988). If we consider the current social and economic factors, as well as the family propagation concept, the amount of aged people in Taiwan will continue to increase and estimate to reach 8.4% of total population in the year 2000. In other words, Taiwan certainly will be an aged country when approaching next decade.

In general, people tend to evaluate others by their outward behavior. Therefore, a strong contrast exists between the elderly's senile body movements and young people's vigorous activities. Many young people feel that the elders are too conservative, while youngsters have creative and innovative ideas. And many young people forget that old people's knowledge has played an important role in making our society progress, which the young people have enjoyed. This causes those young people to look down on the elderly or ignore their precious social experiences.

Since we are all growing older and living in an ageing society now, then why don't we find some ways to helping people of all ages live together happily ? We could help the younger and older generations understand more about each other, let young people know how to cherish the old people's wisdom and give their respects to the old, or even take care of them in order to fill our society with mutual help, satisfaction, and pleasantness. Based on these observations, the researchers

thought that understanding childrens' current attitudes toward the elderly might be a good way to start improving the above situation. Then, the children could be taught healthier attitudes and more positive behaviors in order to get along with the elderly. Television might be a valid medium for accomplishing this mission. As we know, Television has become a necessary part of our lives. Children receive abundant information from all kinds of TV and videotaped programs every day, no matter whether they are in school or at home. If we can display many programs with appropriate attitudes toward the elderly via TV and videos, that might lead children to have a better attitudes toward their elders.

RESEARCH PURPOSES

The purposes of this study are as follows.

1. To investigate the effect of audience-tailored video programs on elementary school students' attitude changes.
2. To investigate the effects of the follow-up discussion method on elementary school students' attitude changes.
3. To provide the results of this study to those who are interested in developing video programs for changing viewer's attitudes.

SCOPE OF THIS STUDY

Readers are encouraged to consider the following limitations when interpreting results of this study

1. Only two versions of the video programs were used in this study: a "perfect" version and a "realistic" version. Effects of other appeals or script formats on students' attitude changes were not studied.
2. The subjects of this study all studied in an urban school, therefore, there is an area limitation on the results.
3. The subjects of this study were all sixth graders, therefore, there is an age limitation on the results. In Taiwan's education system, sixth graders are usually 12 years old.

CHAPTER 2 REVIEW OF LITERATURE

The purpose of this study is to explore the effect of video program's script style and follow-up discussion methods on elementary school students' attitude change. Four topics are addressed in this chapter. First, a review of research studies on attitudes and attitude change is presented and discussed; second, the characteristics of the script style and follow-up discussions are presented; third, related literature on attitude change are briefly excerpted. Finally, research questions are listed.

ATTITUDE AND ATTITUDE CHANGE

Attitude is a kind of thought, idea, or behavioral tendency. It can often be seen in someone's facial expressions, verbal information, or body language. Although the relationship between attitude and behavior is still open to question (Wicker, 1971; Rogers, 1983) at present, most educators believe that there are some sort of positive correlation between them. In other words, if a person has a positive attitude toward an issue, then, he/she will usually pay more attention to that issue. This could be a hint directing instructors to eliminate any possible obstacles that may affect learners' attitudes prior to teaching material.

Because attitude includes a great deal abstract meaning, thus, its definition requires many kinds of explanations (Greenwald, 1968; Audi, 1972; McGuire, 1985). In 1918, Thomas and Znaniecki defined attitude as follows (quoted from Simonson, 1995).

> *"A mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related"*

Zimbardo and Leippe(1991) also defined attitude as: "An evaluative disposition toward some object based upon cognitions, affective reactions, behavioral intentions, and past behaviors". Zimbardo and Leippe thought this kind of disposition could influence cognitions, affective responses, and future intentions and behaviors.

As to the components of attitude, there were many different views, too. Generally, most educators agree that attitude consists of three components: cognitive, affective, and behavioral. Fishbein and Ajzen (1972), however, considered that the components of attitude should include evaluative dimensions, beliefs, as well as behavioral intentions. No

matter what factors were stated, Bednar and Levie (1993) found out that certain conceptions prevail among these educators. These conceptions are:

1.Attitudes is a latent variable.
2.Attitudes have objects.
3.Attitudes have an affective component.
4.Attitudes have a behavioral component.
5.Attitudes have a cognitive component.
6.Attitudes are relatively stable and enduring.

Basically, a communication process cannot take place without four variables: a source(or "sender"), message, recipient (or "receiver"), and a channel. A lot of things under each variable need to be taken care of since they all have an impact on communication effects.(Petty & Cacioppo, 1981; Bednar & Levie, 1993; Huang, 1989). Thus, whether or not communication has a persuasive effect depends on how the variables influence the communication process. Petty & Cacioppo (1981) illustrated this as follows (Figure 2-1).

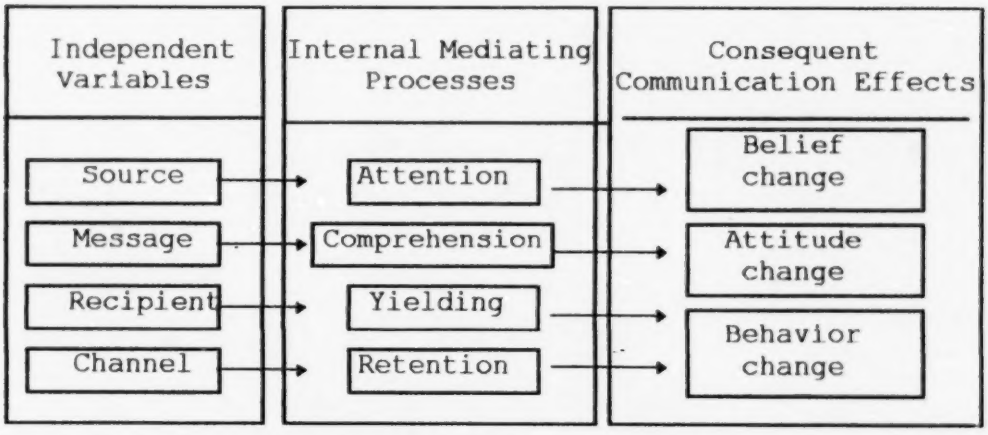

Figure 2-1: Determinants of attitude change in persuasive communication (Petty & Cacioppo, 1981, p.61)

Many psychologists also consider the message-learning approach when they study attitude and attitude change. The range and depth of a message , presenting a one-sided or two-sided argument , giving or not giving a conclusion in the message, and the ordering of message presentations, etc. are topics researchers are still investigating. In fact, many learners react positively when relevant new information is presented to them, especially when the information is just what they desire. Hence, having a pre-production survey of a target audience and providing findings for use in producing instructional materials will lead to more persuasive teaching activity as well as urging learners to change their attitudes, if they had negative attitudes originally. This viewpoint was proven by Levonian (1960, 1962, 1963) . Levonian did a target audience survey before producing a persuasive film about

India's bright side. Ultimately, the film made the audience change their negative attitudes and let them feel the and authentic aspects of India. Dimond and Simonson(1988) also indicated that audiences will be more likely to be persuaded only if messages are designed to resemble authentic, real-world situations.

Regarding the studies on children TV program and attitude change, a serial of research on "Sesame Street" programs could be the famous one. This childrens' TV program presents various minority groups in positive, non-stereotyped ways, and it really helps those minority children gain in cultural pride, self-confidence, and interpersonal cooperation. Greenfield (1984) found that normal childrens' negative attitudes toward disabled or handicapped children as well as childrens' sex-role stereotypes have also been improved by watching specific instructional TV programs.

Base on the above studies findings, it seems that TV programs have a great power to influence childrens' attitude, if the program design could match childrens' needs. Therefore, the ways to select and present the appropriate contents will affect childrens' attitude change a lots.

In 1940s, Carl Hovland conducted a series of experimental studies which called "Yale Study". It consisted of many long-term studies concerning senders, message structures, communication channels, receivers, communication effects, and so on. Below are excerpts from his findings (Petty & Cacioppo, 1981):

I. One-sided or two-sided messages:
- Two-sided messages were more effective for those who were more knowledgeable about the issue or who were initially opposed to the advocacy.
- One-sided communications were more effective for those who knew very little about the issue.

II. Conclusion drawing:
- Drawing a conclusion increases the recipients' comprehension and retains the message arguments.
- The retention and yielding are enhanced when the recipients are allowed to draw conclusion by themselves.

III. Recipient's persuasibility:
- The more educated recipients paid more attention to, understood, and remembered more of the arguments in the films than the less educated, less intelligent recipients.

Some of Hovland's findings were later reexamined by other researchers (e.g. Lazarsfeld & Berelson & Gaudet, 1948; Klapper, 1960). Many researchers found that the power to reinforce receivers' predispositions is much greater than the

power to change their viewpoints. In other words, it is very hard to change person's viewpoint if he/she already has a certain predisposition on an issue. This explains why we usually purchase specific goods from certain companies, or support a candidate only because he is from the party we like. Thus, receivers' educational backgrounds, predispositions on the issue, feelings about the two-sided argument, as well as selective perceptions, all are important determinants influencing in communication results (Bauer, 1964; DeFleur & Ball-Rokeach, 1989; Lee, 1992; Cheng, 1994).

During our literature review, we found that many papers focus only on attitude change theories, and few papers provided effective message design rules for attitude change. Bednar and Levie (1993) gave some guidelines for designing persuasive messages as shown below (only excerpt related to this study are given):

I. The Source
- High-credibility sources exert more persuasive influence than low-credibility sources.
- Sources perceived by the receiver as attractive are more influential.

II. The Message
- To enhance communicator attractiveness, establish belief congruence with the receiver by arguing in favor of positions the receiver is known to hold.
- Arguments are more effective if they are relevant to the receiver's needs.
- Generally two-sided arguments are slightly more effective than one-sided messages.
- It is almost always advisable to state the conclusion explicitly rather than to allow receivers to draw their own conclusions.
- Repetition helps, but only one or two repetitions are likely to have any additional effect.

III. The Channel
- No one media type has been explicitly shown to have greater persuasive effectiveness than any other media type. Face-to-face communication, however, is more effective in promoting acceptance than mediated communication, particularly in difficult cases.

IV. The Receiver
- It is very difficult to change the attitudes of receivers who are highly committed to their positions on an issue.

SCRIPT STYLE AND FOLLOW-UP DISCUSSION

Television programs can be categorized according to production methods, communication effects, content displays, target audiences, and broadcasting hours. Research indicates

that even preschool children like to watch TV programs with story-telling as long as they can comprehend them(Akiyama, 1983). Lu (1976) also pointed out that dramas are childrens' favorite TV programs. That's why almost all childrens' TV programs have drama elements in them.

Which script style is the best to change childrens' attitudes? Crane (1981) found that allowing elementary school students from the USA and the UK to watch video programs about other countries' positive aspects enabled all of them to gain vastly better attitudes toward the other countries' children. This suggests that a script style with a "bright-side" aspect can increase the program's persuasive ability. However, Greenfield (1984) showed that a child's attitude and beliefs can function as a defense against television messages that contradict them. This indicates that children have their own viewpoints and it is hard to change them. Because it is difficult to judge which of these views is correct, the present researchers decided to develop a "perfect" and a "realistic" version of the experimental instrument used in this study.

Howard (1990) proposed follow-up discussions as a powerful technique for promoting positive attitudes, since discussions need learners' involvement to analyze or criticize the message presented. And students can feel their opinions are very important during deep discussions with instructors and other students. Simonson (1995) also suggested that "learners who participate in discussions in which technology-based instructional situations are openly critiqued are likely to develop favorable attitudes toward the situations and toward the message" as one design guideline for attitude change. Allison (1966), Fay (1974), and Burrichter (1986) found that significant attitude changes occurred only when discussions were held right after viewing a program.

RELATED LITERTURES ON ATTITUDE CHANGE

1. Researchers: Hickey, T.& Hickey L. A. & Kalish, R. A. (1968)
   Title: *Childrens' perceptions of the elderly*
   Subjects: 208 elementary school students in LA, USA.
   Findings: 1. Students from wealthy homes are more likely to look favorably upon the elderly than those from the poorer homes.
   2. Most of the students think the elderly have the following physical characteristics: difficulty walking, seeing, and hearing, as well as gray hair, wrinkles, and poor health.
   3. Most of the students think the elderly have following social characteristics: kindness, meanness, poverty, loneliness, eccentricity or senility.

4. Most students frequently mentioned the leisure activities of the elderly include: television-watching, care of pets, sitting in rocking chairs, and doing nothing.

2. Researchers: Croft, R. G. & Stimpson, D. V. & Ross, W. L. & Bray, R. M. & Breglio, V. J.(1969)
Title: *Comparison of attitude changes elicited by live and videotape classroom presentations*
Subjects: 220 Introductory Sociology students at Brigham Young University in the USA.
Findings: 1. The live treatment elicited significantly more change than the videotape treatment.
2. The videotape presentation elicited more change than the control condition.

3. Researcher: Houser, B. B.(1976)
Title: *Audio-visual media as an instructional technique for reducing prejudice in young children*
Subjects: 153 public elementary school students in LA, USA.
Finding: Students' prejudiced responses on minority groups were significantly reduced after viewing educational films.

4. Researcher: Donaldson, J. (1976)
Title: *Channel variations and effects on attitudes toward physically disabled individuals*
Subjects: 96 university students from introductory psychology classes in the USA.
Findings: 1. There were significant differences in modifying attitudes toward disabled persons: Live and Videotaped groups, Live and Control groups, as well as Videotaped and Control groups.
2. There were no significant differences in modifying attitudes toward disabled persons: Videotaped and Audio groups, as well as Audio and Control groups.

5. Researcher: Lin, M. J. (1987)
Title: *Childrens' attitudes toward the elderly*
Subjects: 270 students from preschool to sixth graders in Taiwan, ROC.
Findings: 1. Physical senility characteristic is the main consideration for children in identifying who is the eldest.
2. Children in fifth and sixth grades exhibited more positive feelings toward age than did younger children.
3. Children described the elderly's life and health conditions based on childrens' own negative and stereotypical attitudes.

6. Researcher: Lin, S. M. (1988)
   Title: *Elementary students' attitude change toward disabled classmates - an experimental teaching*
   Subjects: 160 third graders and sixth graders in Taipei, Taiwan, ROC.
   Findings: 1. There is no significant difference in students *liking and disliking disabled classmates* between the Experimental group and the Control group.
   2. There is no significant difference in students' viewpoints on disabled classmates between the Experimental group and the Control group.
   3. The Experimental group has more knowledge about disabled classmates than the Control group.

7. Researcher: Huang, T. H.(1989)
   Title: *Research of message structures on government policy publicity film*
   Subjects: 167 university students from Dept. of Journalism and Dept. of Commercial in Taipei, Taiwan, ROC.
   Findings: 1. The students who watched a film with a two-sided argument had more significant and positive attitude changes than those who watched a film with only one-sided information.
   2. The students who watched a film without fear-arousing appeals had more significant and positive attitude change than those who watched a film with fear-arousing appeals.

8. Researcher: Lin, M. J. (1993)
   Title: *College student attitudes toward the elderly*
   Subjects: 323 university students in Taipei, Taiwan, ROC.
   Findings: 1. The students had lots of positive descriptions of the elderly.
   2. The elderly need be loved, cared for, and are afraid of being lonely.
   3. Those who have lived with old people had a better attitude toward the elderly than those who haven't.
   4. Those who had contact experiences with old people had better attitudes to the elderly than those who hadn't.

RESEARCH QUESTIONS

The authors of this study wished to answer the following research questions. Will Taiwan sixth-graders' negative attitudes toward elderly people be altered if they
• view the videotape, *Living with elders is like having a*

treasure in the home, the perfect version?

- view the videotape, *Living with elders is like having a treasure in the home*, the perfect version, and a discussion among child actors who appeared in the video?
- view the videotape, *Living with elders is like having a treasure in the home*, the perfect version, and then participate in a follow-up discussion led by a teacher?
- view the videotape, *Living with elders is like having a treasure in the home*, the realistic version?
- view the videotape, *Living with elders is like having a treasure in the home*, the realistic version, and a discussion among child actors who appeared in the video?
- view the videotape, *Living with elders is like having a treasure in the home*, the realistic version, and then participate in a follow-up discussion led by a teacher?

CHAPTER 3 METHODOLOGY

SUBJECTS

Since the purpose of this experiment was to investigate the design and implementation factors of video, which aimed at changing childrens' attitude toward the elderly, the first task that challenged the researchers was to identify those children who had negative attitude toward elder people. The researchers conducted a questionnaire survey of 240 sixth graders enrolled in an urban public elementary school in northern Taiwan in December, 1994 to investigate the childrens' attitudes toward elder persons' appearances, abilities, and personality characteristics.

There were 17 Likert-scale items; with 17 points representing extremely negative attitude, and 75 representing extremely positive attitude. The scores of 233 valid subjects formed a normal distribution (K-S Z=1.294, p=.07), with the mean at 54 points and the standard deviation at 7.97 points. So the researchers randomly selected 90 children out of the 120 children whose attitude scores were below the mean, and then assigned these 90 children to one of six experimental groups, with 15 subjects per group. In each group, the numbers of boys and girls were kept as equal as possible, e.g., 7 subjects of one gender and 8 subjects in another gender.

INSTRUMENTS

A. Measuring instruments

A-1. Questionnaire: Childrens' impression about elder person

The purpose of this questionnaire was two-fold. We wanted to identify those children who have negative impressions of the elderly, and also to collect childrens' thoughts as to why they like or don't like elderly persons. The first type of questions contained 17 Likert-scale items. Its Cronbach alpha coefficient was .7301 (N=37). The item analysis data are reported in Table 3-1.

Table 3-1. Item Analysis of "Questionnaire: Childrens' impressions of elderly people" (N=37).

item #	r (item score and total score)	Sig. level (1-tailed)	Critical Ratio	Sig. level (1-tailed)
1	.3230	.025	2.04	.032
2	.2803	.050	2.16	.031
3	.5108	.000	2.18	.024
4	.3138	.030	2.14	.031
5	.2810	.050	2.79	.008
6	.4038	.006	2.02	.032
7	.3525	.017	2.78	.008
8	.3786	.010	2.02	.037
9	.6300	.000	4.85	.000
10	.4638	.002	2.53	.012
11	.5865	.000	5.27	.000
12	.4342	.003	2.78	.008
13	.5986	.000	3.81	.001
14	.6153	.000	4.95	.000
15	.5175	.000	3.57	.002
16	.3515	.017	1.76	.056
17	.3393	.020	2.15	.031

The second type of question inquired about childrens' reasons for liking or not liking elderly people. The data were collected and served as input for writing up the video scripts. Tables 3-2 and 3-3 list the top five behavioral personality traits of elders that children liked or disliked the most.

Table 3-2. Top five behavioral personality traits of elders that children are in favor of

Rank	Behavioral Personality Traits	Frequency
1.	Take care of me; show affection to me	40
2.	Give me pocket money; treat me with tasty food; give me presents; satisfy my needs.....32	
3.	Nice, friendly, helpful; responsible	24
4.	Play with me; read me stories	9
5.	Teach me; encourage me	7

Table 3-3. Top five behavioral personality traits of elders that children dislike

Rank	Behavioral Personality Traits	Frequency
1.	Nag all the time	40
2.	Blame other people, bad tempered	13
3.	Temperamental	7
4.	Poor appearance, poor manners	6
5.	Lack of personal hygiene	6

A-2. Questionnaire: Childrens' attitudes toward the elderly

This questionnaire served as the pre-test and the post-test for this experiment. There are a total of 21 items on this Likert scale (See Appendix). Its Cronbach alpha coefficient was .8761 (N=27). The item analysis data are reported in Table 3-4.

Table 3-4. Item Analysis of "Questionnaire: Childrens' attitude toward the elderly" (N=27).

item #	r (item score and total score)	Sig. level (1-tailed)	Critical Ratio	Sig. level (1-tailed)
1	.6466	.000	2.84	.009
2	.5051	.004	2.58	.014
3	.4207	.015	2.99	.007
4	.3663	.030	3.16	.005
5	.6064	.001	2.80	.010
6	.6859	.000	2.41	.018
7	.4402	.011	2.87	.008
8	.4334	.012	2.58	.014
9	.5389	.002	1.94	.040
10	.4652	.007	2.59	.014
11	.5335	.002	2.25	.023
12	.5457	.002	1.94	.040
13	.4166	.015	1.91	.043
14	.6309	.000	2.41	.018
15	.6533	.000	4.92	.001
16	.5399	.002	2.26	.024
17	.5656	.001	2.87	.008
18	.4630	.007	1.80	.050
19	.7173	.000	1.94	.040
20	.5325	.002	2.48	.017
21	.5129	.003	2.01	.036

B. Experimental instruments

Experimental instruments included four videotapes all aimed at changing childrens' attitudes toward the elderly. Versions A and B were dramas with different script styles.

Version A (Living with elders is like having a treasure in the home: The Perfect Version), 17 minutes in length, presented the bright side of the elderly by emphasizing the benefits children can get from spending time with elders. While version B (Living with elders is like having a treasure in the home: The Realistic Version), 15 minutes in length, emphasized that though elders may have some unpleasant personality traits, they all mean well. Versions C and D were discussions among child actors in each drama respectively.

Version A: "Living with elders is like having a treasure in the home (The Perfect Version)"

June and Ming are sixth-grade classmates. Ming is the only child who lives with just his parents, both of them work full time, which leaves Ming at home alone a lot. June lives with his parents and grandparents. He is very involved with his grandparents.

When June's grandmother sees him having trouble with his composition-writing homework, she brings him his favorite fruit to cheer him up; and his grandfather helps him with his writing. He also takes June and his best friend, Ming, to a neighborhood park to do their science project. June's grandmother persuades his mother to let him watch TV before practicing the piano. And when they go on a picnic, she prepares lots of delicious and nutritious food.

When the group witnesses a motorcycle accident on their way home from the picnic, June's grandparents remain calm. Grandmother tells June and Ming to help send the injured girl to a hospital. Grandfather makes sure they write down the motorcycle license plate number so the motorcycle driver can be identified later. June, Ming and the injured girl all clearly seem to believe the old Chinese saying "Living with an elderly person is like having a treasure in your home".

Version B: "Living with elders is like having a treasure in the home (The Realistic version)"

Pier and Wei are sixth-grade classmates. Pier lives with his grandma and is very involved with her. She nags Pier a lot, which upsets him, but when Pier can't find a borrowed toy, his grandma helps him clean his room and find the long-missing toy. This leads Pier to conclude that even though his grandmother nags, she really does care about him.

Wei's grandfather just retired after almost thirty years in the military, and Wei just can't get along with him. His grandfather dislikes Wei's lack of discipline and recklessness, and punishes him a lot.

When he learns that Wei's grandfather is a former military man, Pier, who has long dreamed of a military career, asks to visit Wei's grandfather. During the conversation between Pier and his grandfather, Wei learns a lot about the profound

effects spending thirty years in military can have on a person's behavior and personality, and his attitude toward his grandfather changes after his father explains the feelings and expectations grandfather has for him. Eventually, Wei grows more willing to try to accept his grandfather.

Versions C and D: Discussion among child actors

The two discussion sessions lasted for about five minutes each. A reporter interviewed the child actors. They talked about the one thing that impressed them the most while making this play, their real-life experience with the elderly, and how their attitudes toward elders changed after making this video. At the end of each discussion session, the reporter emphasized the main purpose of each play, and concluded with an old Chinese saying "If you have an elder person in your family, it's like having a treasure in your home".

EXPERIMENT DESIGN

During May and June of 1994, the researchers assigned 90 sixth graders, identified earlier as having negative attitude toward the elderly, to one of the six groups, 15 subjects in each group, to receive a pre-test, treatment and a post-test.

O_1 X_1 O_7
O_2 X_2 O_8
O_3 X_3 O_9
O_4 X_4 O_{10}
O_5 X_5 O_{11}
O_6 X_6 O_{12}

O_1 to O_6: pre-test
X_1 gp: Watch "Perfect" version, no discussion
X_2 gp: Watch "Perfect" version and child actors' discussion
X_3 gp: Watch "Perfect" version, participate in a discussion led by a teacher
X_4 gp: Watch "Realistic" version, no discussion
X_5 gp: Watch "Realistic" version and child actors' discussion
X_6 gp: Watch "Realistic" version, participate in a discussion led by a teacher
O_7 to O_{12}: post-test

For groups 3 and 6, the subjects' discussion lasted about 10 minutes. A teacher led students reviewing the story, analyzing the personalities of the roles and authenticity of the play, and sharing their experiences with and feelings about living with elderly people.

STATISTICS ANALYSIS

A student's t test with dependent samples was conducted to analyze the before- and after-treatment attitude differences for each of the six groups.

CHAPTER 4 RESULTS AND DISCUSSION

RESULTS

The means and standard deviations of the pre-test and the post-test scores of the six groups are reported in Table 4-1. High scores represent positive attitude toward the elderly. The highest possible score for this 21-item Likert-scale questionnaire was 105 points, the lowest possible score was 21 points.

Table 4-1. Pre-test and post-test scores

Group	n	Pretest Score Mean	(S.D.)	Posttest Score Mean	(S.D.)
1. P/ND	15	76.5714	(8.4007)	78.1333	(9.6056)
2. P/WD	15	71.0000	(9.7395)	78.8667	(8.3995)
3. P/SD	15	75.2857	(9.3350)	72.3333	(10.6548)
4. R/ND	15	69.9333	(7.3530)	73.4000	(9.0538)
5. R/TD	15	72.7333	(4.8472)	72.6000	(6.3785)
6. R/SD	15	72.0714	(7.7008)	73.7333	(7.3627)
	90	72.8736	(8.1409)	74.8444	(8.8494)

P/ND: Perfect version; no discussion
P/TD: Perfect version; watched taped discussion
P/SD: Perfect version; subjects discussed
R/ND: Realistic version; no discussion
R/TD: Realistic version; watched taped discussion
R/SD: Realistic version; subjects discussed

A student's t test with dependent samples was conducted to analyze the before- and after-treatment attitude differences for each of the six groups. It was found that subjects in three of the six groups showed significant attitude improvement after the treatment. The analysis results are reported in Table 4-2.

Table 4-2. Dependent t-test (one-tailed) analysis result

Group	t-value	p	Explanation
1. P/ND	1.79	.048*	Attitude improved significantly
2. P/WD	3.71	.001***	Attitude improved significantly
3. P/SD	- .82	.214	
4. R/ND	1.68	.057	
5. R/TD	- .13	.450	
6. R/SD	2.64	.010**	Attitude improved significantly

* p<=.05 ** p<=.01 *** p<=.001

DISCUSSION

According to Crane's report (1981), Anglo-American childrens' attitudes toward children who live in third world countries improved significantly after viewing videotapes portraying positive images of these children. In this experiment, the "Perfect" version depicted the bright sides of the elderly (e.g., show love and care to children, keep children company). The finding that P/ND and P/WD groups demonstrated significant attitude improvement supported Crane's research finding. But why didn't the P/SD group's attitude improve after the treatment? Actually its post-test score was even lower than its pre-test score. In order to answer this question, the researchers examined the content of the subjects' discussion. It was found that the discussion was only between a few students and the teacher, with the majority of the subjects showing little involvement. At the end of the discussion period, the teacher simply read out a conclusion she wrote prior to the discussion to the group. The researcher believes the low quality of this "discussion" actually damaged the effect of the "perfect" version.

Groups 4 to 6, like groups 1-3, also demonstrated incongruent results. Among groups 4 to 6, group #6 was the only one that exhibited significant results. Groups 4 to 6 all viewed the "Realistic" version of the drama, in which the elders (Pier's grandmother and Wei's grandfather) all had some unpleasant personality traits (grandma was nagging all the time, while grandpa blamed Wei all the time). The script was written to let children understand that behind these unpleasant personality traits, the elders all meant well. It seems that only group 6 (R/SD) accepted this rationale and showed significant attitude improvement after treatment. Why this difference? The content of the subjects' discussion was analyzed to answer this question. The researcher found out that during the discussion, a dialogue between the teacher and one girl student (see below) attracted all subjects' attention and interest.

Teacher (T): Who has lived with elder person? Please raise your hand.

Six students raised their hands.

T: Can any one of you tell us your experience with the elders? Do you enjoy living with them?

A girl student (G1): My grandma lives with us. She prepares a lunch box for me. She puts the same kind of food in my lunch box every day. There is no variety at all. She also tends to prepare more food than I can finish. I don't like it at all.

T: Have you ever try to communicate this feeling

with your grandma?

G1:Yes. The situation gets a bit better for a while, then goes back to the same pattern again.

T: Have you ever wondered why your grandma behaves like this?

G1:My grandma thinks I like the food she puts in my lunch box.

T: OK. So that explains why she puts that food in your lunch box every day. But why does your grandma prepare so much food for you?

G1:My grandma says that I am in my puberty period. She thinks I need to eat lot of food in order to grow. (All children burst into laughter here.)

T: So your grandma does have a point there. She thinks you need nutrition for your physical growth.

In the researchers' opinion, elementary school students in Taiwan all have the experience of "eating lunch boxes", and the sixth graders are in puberty, they are all very interested in the topic of "girls' physical growth". That's why this girl student's story attracted so much attention from other group members. On the other hand, this story reinforced the message the "Realistic" version tried to get across; i.e., sometimes elders may do things that we don't like, but they all mean well". The researchers believed this group may thus have had a deeper understanding of this message, and showed more attitude change than its counterparts (Gps 4 and 5).

CHAPTER 5 SUMMARY AND RECOMMENDATION

SUMMARY

The purpose of this experiment was to study the effects of audience-tailored video and follow-up discussion on sixth graders' attitude change.

During the spring semester of 1994, the researchers assigned 90 sixth graders, identified earlier as having negative attitude toward the elderly, to the following six groups to receive pretest, treatment and posttest.

Group 1: view the videotape, *Living with elders is like having a treasure in the home*, the perfect version?

Group 2: view the videotape, *Living with elders is like having a treasure in the home*, the perfect version, and a discussion among child actors who appeared in the video?

Group 3: view the videotape, *Living with elders is like having a treasure in the home*, the perfect version, and then participate in a follow-up discussion led by a teacher?

Group 4: view the videotape, *Living with elders is like having a treasure in the home*, the realistic version?

Group 5: view the videotape, *Living with elders is like having a treasure in the home*, the realistic version, and a discussion among child actors who appeared in the video?

Group 6: view the videotape, *Living with elders is like having a treasure in the home*, the realistic version, and then participate in a follow-up discussion led by a teacher?

The title of the video came from an old Chinese saying, "Elder persons are like a treasure in one's home". The perfect version presented the bright side of the elderly by emphasizing the benefits children can get from spending time with elders. Whereas the realistic version stressed that though elders might have some unpopular personality traits, they all meant well. Before writing scripts for both versions, the researcher conducted a pre-production survey (N=233) to learn about how sixth graders think and feel about the elder persons, e.g., personality traits children like and dislike about the elderly. The findings were used as an input in developing the video. In the video-taped discussion, a reporter interviewed the children actors and actress. They talked about the one thing that impressed them the most while making this video, their real-life experiences with the elderly, and how their attitudes toward elders differed before and after making this video. The reporter concluded each session with the old Chinese saying about elders are treasures in one's home. While for the two groups in which subjects discussed after

watching video, the researchers arranged to have a teacher lead students to review the story, analyze the personality of the roles and authenticity of the play, and to share their experiences and feeling about living with elder persons.

The researchers conducted student's t-tests of dependent samples to compare the pretest and the posttest scores, and found significant attitude change (change from negative to positive) in three out of six groups.

	t value	p
1. perfect version, no discussion	1.79	.048*
2. perfect v., watched taped discussion	3.71	.001***
3. perfect v., subjects discussed	- .82	.214
4. realistic v., no discussion	1.68	.057
5. realistic v., watched taped discussion	- .13	.450
6. realistic v., subjects discussed	2.64	.010**

RECOMMENDATION

Recommendation for video developers

Empirical data gathered in this experiment and Crane's experiment (1981) indicate that dramas emphasizing positive images of attitude objects lead to improvement in childrens' attitudes. We therefore recommend that when developing dramas aimed at changing childrens' attitudes (from negative to positive), the scripts should stress the bright sides of the attitude objects.

Recommendation for video users (teachers, parents)

Good-quality discussion can be helpful in enabling children to change their attitudes. Make sure the content of the discussion is interesting and relates to all children involved. The conclusion must be made by the children themselves according to the results derived from the discussion. Low-quality discussion is worse than no discussion at all.

BIBLIOGRAPHY

Akiyama, T. (1983). *Research on school television in Japan; 1953-1983.* Tokyo: NHK Broadcasting Culture Research Institute.

Allison, R. W. (1966). The effect of three methods of treating motivational films upon attitudes of fourth, fifth, and sixth grade students toward science, scientists, and scientific careers. (Doctoral dissertation. Pennsylvania State University, 1966). *Dissertation Abstracts*, 28, 994.

Audi, R. (1972). On the conception and measurement of attitudes in contemporary Anglo-American psychology. *Journal for the Theory of Social Behavior*, 2, 179-203.

Ministry of Interior Affairs & Directorate General of Budget, Accounting and Statistics, Executive Yuan, Republic of China (1994). The survey report on the elderly in Taiwan. Taipei: Executive Yuan.

Bauer, R. A. (1964). The obstinate audience: The influence process from the point of view of social communication. *American Psychologist*, 19, 319-28.

Bednar, A. & Levie, W. H. (1993). Attitude-change principles. In Fleming and Levie (Eds.). *Instructional message design principles from the behavioral and cognitive sciences* (2nd ed.). New Jersey: Educational Technology Publications.

Burrichter, A. W. (1986). *A study of elementary public school personnel attitudes toward continuing education in selected communities in Wyoming: An experiment in changing adult attitudes and concepts.* Unpublished doctoral dissertation, University of Wyoming.

Cheng, C. M. (1994). *Journalism and Communication.* Taipei: Open University.

Chian, L. Y. (1988). *Agent welfare and services for the elderly.* Taipei: Wu Nan.

Crane, V. (1981). Content development for childrens' television programs. In Palmer, E. L. & Dorr, A. (Ed.). *Children and the faces of television: Teaching, violence, selling.* San Francisco: Academic.

Croft, R. G. & Stimpson, D. V. & Ross, W. L. & Bray, R. M. & Breglio, V. J. (1969). Comparison of attitude changes elicited by live and videotape classroom presentations. *AV Communication Review*, 17, 315-21.

DeFleur, M. L. & Ball-Rokeach, S. J. (1989). *Theories of mass communication* (5th ed.). New York: Longman.

Dimond, P. & Simonson, M. R. (1988). Film-makers and persuasive films: A study to determine how persuasive films are produced. In M. R. Simonson (Ed.). *Proceedings of the Annual Convention of the Association for Educational Communications and Technology*, 200-12.

Donaldson, J. (1976). Channel variations and effects on attitudes toward physically disabled individuals. *AV*

Communication Review, 24, 135-44.

Fay, F. A. (1974). Effects of a film, a discussion group, and a role playing experience on architecture student's attitudes, behavioral intentions, and actual behavior toward barrier free design (Doctoral dissertation, University of Illinois, 1974). *Dissertation Abstracts International*, 34, 6445A.

Fishbein, M. & Ajzen, I. (1972). Attitude and opinions. *Annual Review of Psychology*, 23, 487-544.

Greenfield, P. M. (1984). *Mind and media – The effects of television, video games, and computers*. Cambridge, Massachusetts: Harvard University Press.

Greenwald, A. G. (1968). On defining attitude and attitude theory. In A. G. Greenwald, & T. C. Brock, & T. m. Ostrom (Eds.), *Psychological foundations of attitudes*. New York: Academic.

Hickey, T.& Hickey L. A. & Kalish, R. A. (1968). Childrens' perceptions of the elderly. *Journal of Genetic Psychology*, 112, 227-35.

Houser, B. B.(1976). *Audio-visual media as an instructional technique for reducing prejudice in young children*. Paper presented at the annual meeting of the American Educational Research Association (San Francisco, California, April 19-23,) (ERIC Document Reproduction Service No. ED 121 241).

Howard, D. J. (1990). Rhetorical question effects on message processing and persuasion; The role of information availability and the elicitation of judgment. *Journal of Experimental Social Psychology*, 26, 217-39.

Huang, T. H.(1989). *Research of message structures on government policy publicity film*. Unpublished thesis, Institute of Journalism Studies, Chinese Culture University.

Klapper, J. (1960). *The effects of mass communication*. Illinois: Free Press.

Lazarsfeld, P. & Berelson, B. & Gaudet, H. (1948). *The people's choice*. New York: Columbia University Press.

Lee, C. H. (1992). Research on the communication effect of non-profit TV advertisements: A case study of the influence of quit smoking non-profit TV advertisements on senior high school students. Unpublished thesis, Institute of Journalism Studies, Fu Hsin Kang College.

Levonian, E. (1960). Development of an audience – tailored film. *AV Communication Review*, 8(1), 62-68.

—— (1962). The use of film in opinion measurement. *AV Communication Review*, 10(4), 250-54.

—— (1963). Opinion change as mediated by an audience – tailored film. *AV Communication Review*, 11(4), 104-13.

Lin, M. J. (1987). Childrens' attitudes toward the elderly. *Journal of Education and Psychology*, 10, 85-104.

—— (1993). College student attitudes toward the elderly. *Journal of Education and Psychology*, 16, 349-84.

Lin, S. M. (1988): *Elementary students' attitude change on disabled classmates – an experimental teaching.* Unpublished thesis, Institute of Special Education, National Taiwan Education College.

Lu, C. C. (1976). *Television theory and practice.* Taipei: Hwa-shin.

McGuire, W. J. (1985). Attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed.). New York: Random House.

Petty, R. E. & Cacioppo, J. T. (1981). *Attitudes and persuasion: Classic and contemporary approaches.* Dubuque, Iowa: Wm. C. Brown Company Publishers.

Rogers, E. M. (1983). *Diffusion of innovations* (3rd ed). New York: Free.

Simonson, M. (1995). Instructional technology and attitude change. In G. J. Anglin (Ed.). *Instructional Technology – Past, Present, and Future* (2nd ed.). Englewood, Colorado: Libraries Unlimited.

Wicker, A. W. (1971). An examination of the "other-variables" explanation of attitude-behavior inconsistency. *Journal of Personality and Social Psychology,* 19, 18-30.

Zimbardo, P. & Leippe, M. (1991). *The psychology of attitude change and social influence.* Philadelphia: Temple University Press.

Appendix A

Questionnaire: Childrens' attitudes toward the elderly

Instruction: Please check one response (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree).

	SD	D	N	A	SA
1. Elders are humorous and interesting to chat with	❑	❑	❑	❑	❑
2. Elders tend to encourage children to achieve their goals.	❑	❑	❑	❑	❑
3. Elders like to start speaking by saying "When I was young, ..." I've heard too much of that kind of talk and am very tired of it.	❑	❑	❑	❑	❑
4. Elders are slow to respond	❑	❑	❑	❑	❑
5. Elders nag a lot.	❑	❑	❑	❑	❑
6. Elders are temperamental, difficult to get along with.	❑	❑	❑	❑	❑
7. Elders don't like children.	❑	❑	❑	❑	❑
8. Elders have poor health.	❑	❑	❑	❑	❑
9. Elders don't have much money. . . .	❑	❑	❑	❑	❑
10. Elders are lonely.	❑	❑	❑	❑	❑
11. One can learn a lot from the elders.	❑	❑	❑	❑	❑
12. It's a waste to spend time with elders.	❑	❑	❑	❑	❑
13. Elders' skin looks terrible. . . .	❑	❑	❑	❑	❑
14. Elders walk so slowly. I can't stand it	❑	❑	❑	❑	❑
15. Elders have poor eye-sight. . . .	❑	❑	❑	❑	❑
16. Elders don't hear very well. It's very tiring to talk with them. . .	❑	❑	❑	❑	❑
17. Elders know how to overcome difficult situations.	❑	❑	❑	❑	❑
18. Elders mean well in whatever they do.	❑	❑	❑	❑	❑
19. Though they might look serious, elders are very good-natured. .	❑	❑	❑	❑	❑
20. Elders will help children solve problems.	❑	❑	❑	❑	❑
21. Elders have good living habits (e.g., keep their residences clean)	❑	❑	❑	❑	❑